

Office Memorandum • UNITED STATES GOVERNMENT

TO : Files

FROM : Drs. C. L. Dunham and L. W. Tuttle

SUBJECT: OPERATION GREENHOUSE - TEST RESULTS

SYMBOL: BMM:LWT

DATE: May 9, 1951

403892

Drs. Dunham and Tuttle spent approximately three weeks at Eniwetok Atoll in connection with the Biomedical Test Program. This program was designed to answer a number of specific questions concerning the effects of atomic bomb explosions upon biological systems. The first problem was to determine whether experimental data obtained under laboratory conditions could be directly applied to bomb conditions.

In addition, the program was set up to give accurate information concerning radiation dosages and effective radiation energies at varying distances from the bomb; and a detailed analysis of the thermal spectrum of the bomb explosion. Up to the time of the test there was uncertainty as to the relative effectiveness of the infra-red, visible and ultra-violet portions of the spectrum in producing flash burn injury. The tests were also designed to verify the efficacy of certain biological dosimeters in correlating purely physical measurements of radiation dosages and energies with biological damage. While the factual information concerning these problems must await detailed analyses which will be forthcoming in the next few weeks, the preliminary data indicate that the tests were completely successful in providing definitive answers concerning the radiation dosage - energy question and the thermal burn problem.

OPENNET ENTRY	
<input type="checkbox"/> Authorized for Public Release	
By: <i>6/14/75</i>	Date: <i>7/14/75</i>
Entered in OpenNet	
By: <i>YES</i>	Date: <i>NV0026183</i>
<input type="checkbox"/> Not Authorized for Public Release	
By:	Date:

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY:	DETERMINATION (CIRCLE NUMBER(S))
<i>AA Swinson 11/16/94</i>	1. CLASSIFICATION RETAINED
REVIEWER (ADD):	2. CLASSIFICATION CHANGED TO:
NAME: <i>ML KOLBAY</i>	3. CONTAINS NO DOE CLASSIFIED INFO
DATE: <i>11/16/94</i>	4. COORDINATE WITH:
	5. CLASSIFICATION CANCELLED
	6. CLASSIFIED INFO BRACKETED
	7. OTHER (SPECIFY):

MILITARY RESEARCH & APPL.

DOT ARCHIVES

82

Files

May 9, 1951

Drs. C. L. Dunham and L. W. Tuttle

OPERATION GREENHOUSE - TEST RESULTS

SYMBOL: BSM:Lat

Drs. Dunham and Tuttle spent approximately three weeks at Eniwetok Atoll in connection with the Biomedical Test Program. This program was designed to answer a number of specific questions concerning the effects of atomic bomb explosions upon biological systems. The first problem was to determine whether experimental data obtained under laboratory conditions could be directly applied to bomb conditions.

In addition, the program was set up to give accurate information concerning radiation dosages and effective radiation energies at varying distances from the bomb; and a detailed analysis of the thermal spectrum of the bomb explosion. Up to the time of the test there was uncertainty as to the relative effectiveness of the infra-red, visible and ultra-violet portions of the spectrum in producing flash burn injury. The tests were also designed to verify the efficacy of certain biological dosimeters in correlating purely physical measurements of radiation dosages and energies with biological damage. While the factual information concerning these problems must await detailed analyses which will be forthcoming in the next few weeks, the preliminary data indicate that the tests were completely successful in providing definitive answers concerning the radiation dosage - energy question and the thermal burn problem.

BEST COPY AVAILABLE

cc: Mr. Simons
Mr. Brown

OPENNET ENTRY	
<input type="checkbox"/> Authorized for Public Release	
By <i>BS for FG D...</i>	Date <i>7/1/95</i>
Entered in OpenNet	
By <i>YES</i>	Date <i>NV0026183</i>
<input type="checkbox"/> Not Authorized for Public Release	
By	Date

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY:	DETERMINATION (CIRCLE NUMBER(S))
<i>AA SIMONELLI 11/2/94</i>	1. CLASSIFICATION RETAINED
REVIEWER (ADD):	2. CLASSIFICATION CHANGED TO:
NAME: <i>ML KELBAY</i>	3. CONTAINS NO DOE CLASSIFIED INFO
DATE: <i>11/16/94</i>	4. COORDINATE WITH:
	5. CLASSIFICATION CANCELLED
	6. CLASSIFIED INFO BRACKETED
	7. OTHER (SPECIFY):

MILITARY RESEARCH & APPL. 7-1

DOE ARCHIVES

Files

May 2, 1961

Mrs. J. J. Tucker and M. J. Little

Subject: Biological Test Program

300000: 000000

Mrs. Tucker and Little sent approximately three seals at Bikini Atoll in connection with the Biological Test Program. This program was designed to answer a number of specific questions concerning the effects of atomic bomb explosions upon biological systems. The first problem was to determine whether experimental data obtained under laboratory conditions could be directly applied to bomb conditions.

In addition, the program was set up to give accurate information concerning radiation dosages and effective radiation energies at various distances from the bomb; and a detailed analysis of the thermal spectrum of the bomb explosion. As to the time of the test there was uncertainty as to the relative effectiveness of the infra-red, visible and ultra-violet portions of the spectrum in causing flash burn injury. The tests were also designed to verify the efficacy of certain biological dosimeters in correlating purely physical measurements of radiation dosages and energies with biological damage. While the actual information concerning these problems must await detailed analyses which will be forthcoming in the next few weeks, the preliminary data indicate that the tests were completely successful in providing definitive answers concerning the radiation dosage - energy question and the thermal burn problem.

OPENNET ENTRY	
<input checked="" type="checkbox"/> Authorized for Public Release	By <i>BSM FG Rosing</i> Date <i>7/11/95</i>
Entered in OpenNet	By <i>YES</i> Date <i>NV0026183</i>
<input type="checkbox"/> Not Authorized for Public Release	By _____ Date _____

cc: Mr. Simons
Mr. Brown

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY: <i>AA Simons 11/2/94</i>	DETERMINATION (CIRCLE NUMBER(S)) 1. CLASSIFICATION RETAINED 2. CLASSIFICATION CHANGED TO: 3. CONTAINS NO DOE CLASSIFIED INFO 4. COORDINATE WITH: 5. CLASSIFICATION CANCELLED 6. CLASSIFIED INFO BRACKETED 7. OTHER (SPECIFY):
REVIEWER (ADD): NAME: <i>MLKCLBM</i> DATE: <i>11/16/94</i>	

GPO 16-55741-1

OFFICE ▶	<i>BMM</i>					
SURNAME ▶	<i>028</i>					
DATE ▶	<i>4/1/61</i>					